課程詳細資訊

年度	114	授課方式	實體授課
大學院校名稱	國立政治大學	系所名稱	應用數學系
課程領域	微積分課程	課程編號	000713041
課程中文名稱	微積分甲	課程英文名稱	Calculus A
授課教師	洪芷漪	課程學分	3
課程學分費(單一學分費)	1200元 , 總學分費 : 3600元	非本校學生課程學分費(單一學分費)	1200元 , 總學分費 : 3600元
其他費用	0		
授課地點	政治大學校內（地點未定）		
開放修課人數上限	60	最低修課人數門檻	14
非本校生修課人數上限	60	高中生修課人數上限	10
授課起日	20250715	授課訖日	20250820
實體上課時間	星期二 Tuesday 09:10-12:00 星期二 Tuesday 13:10-16:00 星期三 Wednesday 09:10-12:00 星期三 Wednesday 13:10-16:00		
成績呈現方式	百分制	成績結果說明	0~100分
使用開課學校自建的報名系統	否		

課程概述

Calculus is a basic, unversity-entrance level mathematics course which is needed as a prerequiste for the majority of the other university-level mathematics courses. The main goal of the course is to expose students to the fundamentals of calculus as well as provide rigorous training in analytic thinking and (mathematical) problem solving.

課程目標

Students will learn how to compute limits and derivates, applications of differentiation, integration and techniques of integration as well as applications of integration. Moreover, students will learn key results such as the extreme value theorem, mean value theorem, fundamental theorem of calculus, etc.

課程要求

指定閱讀

James Stewart, Daniel Clegg, Saleem Watson. Calculus, Early Transcendentals, Metric Version, Ninth Edition

評量方式 (修課證明)

Quizzes (every two weeks):40%
Midterm Exam:30%
Final Exam:30%

評量方式 (課程認證考試)

課程大綱

週次 Week	課程主題 Topic	課程內容與指定閱讀 Content and Reading Assignment	教學活動與作業 Teaching Activities and Homework	學習投入時間Student workload expectation	
				課堂講授 In-class Hours	課程前後 Outside-of-class Hours
1	Function and Logarithms	1	Selected Exercises	3	5
2	Limits and Continuity	2	Selected Exercises	3	5
3	Limits at Infinity and Derivatives	2	Selected Exercises	3	5
4	Differentiation Rules I	3	Selected Exercises	3	5
5	Differentiation Rules II	3	Selected Exercises	3	5
6	Extreme Values and Shape of graph	4	Selected Exercises	3	5
7	Indeterminate Forms, Optimization and Antiderivatives	4	Selected Exercises	3	5
8	Catch up		Selected Exercises	3	5
9	Midterm Exam		Selected Exercises	2	6
10	Definite Integrals	5	Selected Exercises	3	5
11	Fundamental Theorem of Calculus and Indefinite integral	5	Selected Exercises	3	5
12	Substitution Rule and Areas between	5 - 6	Selected Exercises	3	5

	Curves				
13	Volumes	6	Selected Exercises	3	5
14	Integration by Parts and Trigonometric Integrals	7	Selected Exercises	3	5
15	Trigonometric Substitution and Integration by Partial Fractions	7	Selected Exercises	3	5
16	Improper Integrals	7	Selected Exercises	2	6
17	Improper Integrals	7		3	5
18	Final Exam				8

聯絡資訊

開課學校聯絡窗口：
教務處註冊組 林婉婷小姐
02-29393091#63276
tinging@nccu.edu.tw

開課學系聯絡窗口：
應用數學系 陸小姐
02-29393091#62370
lu1117@nccu.edu.tw

授課教師聯絡方式：
洪芷漪老師
02-29393091#67372
hongjyyi@nccu.edu.tw

課程 / 認證考試連結

備註

1.本課程繳費人數如未達14人將停開。如停開，已成功繳費同學須另行提供本人帳戶資料憑辦造冊退費。

2.一經報名繳費完成，於課程開始前退課者，將酌收行政處理費新臺幣兩百元。本課程開始上課後，即不再受理退費。

3.本課程之週三下午三小時課程為實習課，修課學生皆須參與。

4.修習且及格（60分為及格）者將核發修習證明書乙紙，並於成績登錄後一週寄發至報名時填寫之通訊地址。

5.本校應數系新生修習本課程不予採認學分；日後如申請修讀應數系雙主修／輔系，此科目亦無法採認為雙輔學分，請務必留意。